



(REFERENCE COPY - Not for submission)

FCC Form 399: Incentive Auction Relocation Reimbursement Fund System

File Number: **0000028782** | FRN: **0002107274** | Facility ID: **65670**
Repack Channel: **14 (UHF)** | Entity: **Broadcaster** | Filing Status: **Submitted**
Date Submitted: **07/13/2017**

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
GREATER WASHINGTON EDUCATIONAL TELECOMMUNICATIONS ASSOC Doing Business As: GREATER WASHINGTON EDUCATIONAL TELECOMMUNICATIONS ASSOC	Legal & Business Affairs Dept. 3939 Campbell Ave Arlington, VA 22206 United States	+1 (703) 998-2851	LDELANEY@WETA.ORG	Not-for-Profit

Reimbursement Contact Information

Reimbursement Contact Name and Information

Applicant	Address	Phone	Email
[Confidential]			

Preparer Contact Information

Preparer Contact Name and Information

Applicant	Address	Phone	Email
Joseph L. Snelson , Jr . <i>Technical Consultant</i> <i>Meintel, Sgrignoli & Wallace</i>	1282 Smallwood Drive, Suite 372 Waldorf, MD 20603 United States	+1 (303) 344-8037	joe.snelson@mswdtv.com

**Broadcaster
Information
and
Transition
Plan**

Question	Response
Will the station be sharing equipment with another broadcast television station or stations (e.g., a shared antenna, co-location on a tower, use of the same transmitter room, multiple transmitters feeding a combiner, etc.)? If yes, enter the facility ID's of the other stations and click 'prefill' to download those stations' licensing information.	Yes
Briefly describe transition plan	WETA transmits on channel 27 from a shared antenna. WETA was assigned channel 14 for repack, adjacent to Land Mobile operations. See the attached Budget Justification for details on the issues and the transition plan.

Transmitters

Section	Question	Response
Transmitter Related Expenses	Do you have transmitter related expenses?	Yes

**Auxiliary
Transmitter****Add Transmitter Information**

Section	Question	Response
Existing Transmitter Description	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	Alternate Site backup transmitter
	Ownership	Owned
	Owner	
	Site	
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
Existing Transmitter Manufacturer and Type	Manufacturer	
	Model	CD100P1
	Year	1997
	Type	Inductive Output Tube
	IOT Power Type	Single
	Description	
	Power capacity	17.5 kw
	Solid State Cooling	
	Solid State Power Capacity	
	Other Transmitter Type	

**Auxiliary
Transmitter****New Transmitter Costs**

Section	Question	Response
New Transmitter	Use	Auxiliary (Backup)
	Description of Use	Alternate Site backup transmitter
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Manufacturer	
	Model	ULXTE-20
	Transmitter Type	Solid state
	IOT Power Type	
	Other	
	Power capacity	
	Solid State Cooling	Liquid
	Solid State Power Capacity	12.9 kw
	Other Transmitter Type	
	Justification for New Transmitter	See attached letter from manufacturer regarding IOT transmitters.

**Auxiliary
Transmitter****Other Transmitter Costs**

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	No

	Transformer (480V)	No
	Power	
	Rigid Conduit and Wiring	No
	Size	
	Length	
	Other Electrical Service	Yes
	Description	Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Type	
	Size	
	Other Size	
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leasehold improvement?	Yes
	Size	900.0 square feet
Channel 14 Costs	Is an RF Consulting Engineer needed?	No
	Is a channel 14 Mask Filer needed?	Yes
	Is additional field engineering time needed?	No
	Number of Days	

Auxiliary
Transmitter

Other Transmitter Cost Not Listed

Name	Description
Notch Filter Install	Installation of Land Mobile Notch filters

**Auxiliary
Transmitter****Add Transmitter Information**

Section	Question	Response
Existing Transmitter Description	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	Used in case of failure of main
	Ownership	Owned
	Owner	
	Site	
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
Existing Transmitter Manufacturer and Type	Manufacturer	
	Model	DHD15P1
	Year	2003
	Type	Solid state
	IOT Power Type	
	Description	
	Power capacity	
	Solid State Cooling	Air
	Solid State Power Capacity	3.6 kw
	Other Transmitter Type	

**Auxiliary
Transmitter****New Transmitter Costs**

Section	Question	Response
New Transmitter	Use	Auxiliary (Backup)
	Description of Use	Used in case of failure of main
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Manufacturer	
	Model	ULXTE-6
	Transmitter Type	Solid state
	IOT Power Type	
	Other	
	Power capacity	
	Solid State Cooling	Liquid
	Solid State Power Capacity	4.32 kw
	Other Transmitter Type	
	Justification for New Transmitter	See attached letter from GatesAir regarding inability to retune current transmitter

**Auxiliary
Transmitter****Other Transmitter Costs**

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	No

	Switchgear (industrial 800 amp)	No
	Transformer (480V)	No
	Power	
	Rigid Conduit and Wiring	No
	Size	
	Length	
	Other Electrical Service	Yes
	Description	Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Type	
	Size	
	Other Size	
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leasehold improvement?	No
	Size	
Channel 14 Costs	Is an RF Consulting Engineer needed?	No
	Is a channel 14 Mask Filer needed?	Yes
	Is additional field engineering time needed?	No
	Number of Days	

**Auxiliary
Transmitter**

Other Transmitter Cost Not Listed

Name	Description
Filter Design	Anticipated expense in the design of Mask and notch filtering to reduce interference to into Land Mobile stations.
Notch Filter Install	Installation of additional notch filtering to protect Land Mobile stations.

**Primary
Transmitter**

Existing Transmitter Information

Section	Question	Response
Existing Transmitter Description	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	
	Ownership	Owned
	Owner	
	Site	
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
Existing Transmitter Manufacturer and Type	Manufacturer	
	Model	DHD15P1
	Year	2003
	Type	Solid state
	IOT Power Type	
	Description	
	Power capacity	
	Solid State Cooling	Air
	Solid State Power Capacity	3.6 kw
	Other Transmitter Type	

**Primary
Transmitter**

New Transmitter Costs

Section	Question	Response
New Transmitter	Use	Primary (Main)
	Description of Use	
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Manufacturer	
	Model	ULXTE-6
	Transmitter Type	Solid state
	IOT Power Type	
	Other	
	Power capacity	
	Solid State Cooling	Liquid
	Solid State Power Capacity	4.32 kw
	Other Transmitter Type	
	Justification for New Transmitter	See attached letter from GatesAir regarding inability to retune current transmitter

**Primary
Transmitter**

Other Transmitter Costs

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	No

	Transformer (480V)	No
	Power	
	Rigid Conduit and Wiring	No
	Size	
	Length	
	Other Electrical Service	Yes
	Description	Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Type	
	Size	
	Other Size	
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leasehold improvement?	Yes
	Size	2000.0 square feet
Channel 14 Costs	Is an RF Consulting Engineer needed?	Yes
	Is a channel 14 Mask Filer needed?	Yes
	Is additional field engineering time needed?	No
	Number of Days	

Primary Transmitter

Other Transmitter Cost Not Listed

Name	Description
Notch Filter Install	Installation of additional notch filtering to protect Land Mobile stations.
Rent Increase	Estimated increase on top of current lease due to having to expand the building to accommodate large channel 14 filtering.
Filter Design	Anticipated expense in the design of Mask and notch filtering to reduce interference to into Land Mobile stations.

**Interim
Transmitter**

New Transmitter Costs

Section	Question	Response
New Transmitter	Use	Interim
	Description of Use	
	Change Type	Purchase
	Manufacturer	
	Model	ULXTE-8
	Transmitter Type	Solid state
	IOT Power Type	
	Other	
	Power capacity	
	Solid State Cooling	Liquid
	Solid State Power Capacity	4.0 kw
	Other Transmitter Type	
	Justification for New Transmitter	WETA must provide interim facility for WHUT. See attached Budget Justification: AUXILIARY TRANSMITTER SITE

**Interim
Transmitter**

Other Transmitter Costs

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	No
	Transformer (480V)	No
	Power	

	Rigid Conduit and Wiring	No
	Size	
	Length	
	Other Electrical Service	Yes
	Description	Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Type	
	Size	
	Other Size	
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leasehold improvement?	No
	Size	
Channel 14 Costs	Is an RF Consulting Engineer needed?	No
	Is a channel 14 Mask Filer needed?	No
	Is additional field engineering time needed?	No
	Number of Days	
Inside RF System	Is an additional interior RF system required to support this interim transmitter?	No

**Interim
Transmitter**

Other Transmitter Cost Not Listed

Name	Description
Studio-Transmitter-Link	Microwave or fiber connectivity to get programming from the studio to the interim transmitter site.

**Interim
Transmitter**

New Transmitter Costs

Section	Question	Response
New Transmitter	Use	Interim
	Description of Use	
	Change Type	Purchase
	Manufacturer	
	Model	ULXTE-72
	Transmitter Type	Solid state
	IOT Power Type	
	Other	
	Power capacity	
	Solid State Cooling	Liquid
	Solid State Power Capacity	40 kw
	Other Transmitter Type	
	Justification for New Transmitter	WETA must provide interim facility for WPXW. See attached Budget Justification: AUXILIARY TRANSMITTER SITE

**Interim
Transmitter**

Other Transmitter Costs

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	No
	Transformer (480V)	No
	Power	
	Rigid Conduit and Wiring	No
	Size	
	Length	
	Other Electrical Service	Yes
	Description	Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Type	
	Size	
	Other Size	
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leasehold improvement?	No
	Size	
Channel 14 Costs	Is an RF Consulting Engineer needed?	No
	Is a channel 14 Mask Filer needed?	No

	Is additional field engineering time needed?	No
	Number of Days	
Inside RF System	Is an additional interior RF system required to support this interim transmitter?	No

Interim
Transmitter

Other Transmitter Cost Not Listed

Name	Description
Studio-Transmitter-Link	Microwave or fiber connectivity to get programming from the studio to the interim transmitter site.

Antennas

Section	Question	Response
Antenna Related Expenses	Do you have antenna related expenses?	Yes

**Primary
Antenna****Existing Antenna Information**

Section	Question	Response
Existing Antenna Description	Type of change	Retune Existing
	Antenna Use	Primary (Main)
	Description of Use	N/A
	Ownership	Leased
	Owner	District of Columbia Joint Tower Venture
	Site	N/A
	Is the existing antenna shared with another station or stations?	Yes
	Is the existing antenna directional?	No
	Is antenna in operating condition?	Yes
	Is antenna located on or in close proximity to an antenna farm?	Yes
Existing Antenna Manufacturer and Type	Class	Full Power
	Mounting	Top-mount stacked
	Antenna position in stack	Top
	Polarization	Horizontal
	Type	Broadband Panel
	Number of Stations Supported	3
	Number of Panels	48

Design power capacity in use	47.0 %
Lower Limit	470.00 MHz
Upper Limit	860.00 MHz
Other Antenna Type	N/A
ERP: (Effective Radiated Power)	73.00 kW
Manufacturer	DIE
Model	TUP-04-12-2
Year	1999

Facility ID's and Call Signs of all stations with whom the antenna is shared.

Facility ID	Call Sign
27772	WHUT-TV
74091	WPXW-TV

Primary Antenna

Adjustment to Existing Antenna

Section	Question	Response
Sweep Test of Existing Antenna	Do you need a sweep test of existing antenna?	Yes

Primary Antenna

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	Yes
	Type	New
	Number of channels supported	3
	Frequencies of channels supported	RF channel
	Frequency	N/A

Enter a list of RF channel numbers.

RF Channel Number
14
33
35

**Primary
Antenna**

Other Antenna Cost Not Listed

Information not provided.

**Auxiliary
Antenna****Add Antenna Information**

Section	Question	Response
Existing Antenna Description	Type of change	Purchase New
	Antenna Use	Auxiliary (Backup)
	Description of Use	Alternate site backup
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this antenna currently shared with any other stations?	No
	Is this antenna directional?	No
	Is antenna in operating condition?	Yes
	Is antenna located on or in close proximity to an antenna farm?	No
Existing Antenna Manufacturer and Type	Class	Full Power
	Mounting	Side-mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Type	Slotted coaxial
	Number of Stations Supported	N/A
	Number of Panels	N/A
	Design power capacity in use	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	30.00 kW

Manufacturer	
Model	TFU-8JST-R03
Year	1998

Auxiliary Antenna

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Auxiliary (Backup)
	Description of Use	See attached Budget Justification: Auxiliary Transmitter Site
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Ownership	Owned
	Owner	N/A
	Is antenna shared?	Yes
	Is antenna directional?	No
	Will antenna be located on or in close proximity to an antenna farm?	No
New Antenna Manufacturer and Type	Class	Full Power
	Mounting	Side-mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Type	Broadband Panel
	Number of Stations Supported	3
	Number of Panels/Bays	32
	Lower Limit	470.00 MHz
	Upper Limit	860.00 MHz
	Design power capacity in use	50.0 %
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	30.00 kW

Manufacturer	
Model	TUA-O4-8/32H-1-R SM
Year	2018
Justification for New Antenna	See attached Budget Justification: AUXILIARY TRANSMITTER SITE. This upgrade is to support two interim stations operations.

Auxiliary Antenna

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	Yes
	Type	New
	Number of channels supported	3
	Frequencies of channels supported	RF channel
	Frequency	N/A
	Do you need a combiner output splitter /switcher for dual feed lines?	No
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	Broadband
	Feed Line Size	6 1/8 inches
Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	Yes
Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	Yes

Sweep Test	Do you require the sweep testing of transmission line and antenna?	Yes
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Enter a list of RF channel numbers.

RF Channel Number
14
33
35

Auxiliary Antenna

Other Antenna Cost Not Listed
Information not provided.

**Transmission
Line**

Section	Question	Response
Transmission Line Related Expenses	Do you have transmission line related expenses?	Yes

**Auxiliary
Transmission
Line**

Add Transmission Line

Section	Question	Response
Existing Transmission Line Description	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	Alternate Transmitter Site
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmission currently shared with any other stations?	No
	Is Transmission Line in operating condition?	Yes
Existing Transmission Line Manufacturer and Type	Manufacturer	
	Type	Rigid
	Diameter	3 1/8 inches
	Segment Length	19 ½ '
	Other Segment Length	
	Number of parallel runs	1
	Length	521 feet per run

**Auxiliary
Transmission
Line**

New Transmission Line

Section	Question	Response
New Transmission Line Costs	Use	Auxiliary (Backup)
	Description of Use	Off site backup for 3 stations
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Type	Rigid
	Diameter	6 1/8 inches
	Segment Length	Broadband
	Other Segment Length	
	Number of parallel runs	1
	Length	521 feet per run
	Justification for New Transmission Line	See attached Budget Justification: AUXILIARY TRANSMITTER SITE. Line must support interim operation for two other stations.

**Auxiliary
Transmission
Line**

Other Transmission Line Expenses Not Listed

Information not provided.

Tower Equipment And Rigging Costs

Section	Question	Response
Tower Equipment or Rigging Costs Changes	Do you have tower equipment or rigging costs changes?	Yes

Primary Tower

Existing Tower

Section	Question	Response
Existing Tower Description	Type of change	Modify Existing
	Tower Use	Primary (Main)
	Description of Use	N/A
	Ownership	Leased
	Is this tower consider Complex?	Candelabra
	Is this tower currently shared with any other stations?	Yes
	One or more FM, AM or TV radio broadcaster(s)	Yes
	Others Types of Users	No
	Is tower documented for structural analysis?	Yes
	Is tower compliant with Rev G?	Unknown
Existing Tower Structure Registration	Do you have a tower registration number?	Yes
	ASR Number	1051670
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	38° 57' 01.0" N-
	Longitude (NAD83)	077° 04' 46.0" W-
	Overall Structure Height	691.92 feet
	Support Structure Height	564.95 feet
	Ground Elevation Above Mean Sea Level (AMSL)	409.77 feet

	Structure Type	TOWER - Free Standing or Guyed Structure
	Tower Owner	ACC Licensee, LLC
	Date Constructed	11/12/1998

**FM, AM or TV radio
broadcasters. Facility ID's,
Call Signs and Services of
other broadcast stations with
whom the tower is shared**

Facility ID	Call Sign	Service
65593	WUSA	DTV
73252	WRQX	FM
27772	WHUT-TV	DTV
74091	WPXW-TV	DTV
70933	WASH	FM
65707	WHUR-FM	FM
1051	WJLA-TV	DTV

**Primary
Tower**

Tower Modification Costs

Section	Question	Response
Engineering Study	Please what type of engineering study is required, if any:	Study needed for documented tower
Tower Reinforcements	Please select whether tower reinforcements are needed:	No reinforcements needed

**Primary
Tower**

Tower Rigging Costs

Section	Question	Response
Tower Rigging Costs	Complex Tower	Candelabra
Helicopter Services Required	Are helicopter services required?	No

**Primary
Tower**

Other Tower Expenses Not Listed

Information not provided.

Auxiliary Tower

Add Tower

Section	Question	Response
Existing Tower Description	Type of change	Modify Existing
	Tower Use	Auxiliary (Backup)
	Description of Use	Alternate site for WETA
	Ownership	Owned
	Is this tower consider Complex?	No
	Is this tower currently shared with any other stations?	Yes
	One or more FM, AM or TV radio broadcaster(s)	Yes
	Others Types of Users	Yes
	Is tower documented for structural analysis?	Yes
	Is tower compliant with Rev G?	No
Existing Tower Structure Registration	Do you have a tower registration number?	Yes
	ASR Number	1018169
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	38° 53' 30.0" N-
	Longitude (NAD83)	077° 07' 54.0" W-
	Overall Structure Height	495.40 feet
	Support Structure Height	492.12 feet
	Ground Elevation Above Mean Sea Level (AMSL)	370.07 feet
	Structure Type	LTOWER - Lattice Tower
	Tower Owner	GREATER WASHINGTON EDUCATIONAL TELECOMMUNICATIONS ASSN DBA = WETA FM
	Date Constructed	02/12/2014

**FM, AM or TV radio
broadcasters. Facility ID's,
Call Signs and Services of
other broadcast stations with
whom the tower is shared**

Facility ID	Call Sign	Service
12460	WGTS	FM
4644	WAVA-FM	FM
65669	WETA	FM

Other Types of Users

Users
Cellular
Amateur Radio
Trunking

Auxiliary Tower

Tower Modification Costs

Section	Question	Response
Engineering Study	Please what type of engineering study is required, if any:	Study needed for documented tower
Tower Reinforcements	Please select whether tower reinforcements are needed:	Minor Reinforcements needed

Auxiliary Tower

Tower Rigging Costs

Section	Question	Response
Tower Rigging Costs	Complex Tower	N/A
Helicopter Services Required	Are helicopter services required?	No

Auxiliary Tower	Other Tower Expenses Not Listed
	Information not provided.

Outside Professional Services Costs

Section	Question	Response	
Outside Project Management Services	Do you require outside project management services?	Yes	
	Number of Hours	2100	
	Explanation	See attached Budget Justification: Outside Professional Services	
Outside RF consulting Engineering Services	Perform engineering study for new channel assignment and antenna development	Yes	
	Prepare engineering section of Form FCC Construction Permit Application	Yes	
	For Auxiliary Facility	N/A	
	For Main Facility	Yes	N /A
	Prepare engineering section of Form FCC License to Cover Application	Yes	
	For Auxiliary Facility	Yes	
	For Main Facility	Yes	
	Prepare request for Special Temporary Authority	Yes	
	Quantity	1	
	Do you have Distributed Transmission System engineering services?	N/A	
	Critical Facility	N/A	
	Terrain-Shielded Facility	N/A	
Attorney and Other Outside Consulting Services	Prepare and file Form FCC Construction Permit Application	Yes	
	For Auxiliary Facility	Yes	
	For Main Facility	Yes	

	Prepare and file Form FCC License to Cover Application	Yes
	For Auxiliary Facility	Yes
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes
	Quantity	1
	NEPA Section 106 environmental review	No
	Environmental Assessment	No
	ASR Modification	No
	FAA Consultation (including preparation of FAA Form 7460)	No
	Negotiation of Lease and other Matter for Shared Locations	Yes
	Prepare or Review FCC Form 399 for Reimbursement	Yes
	Address transition timing and coordination issues w/ other stations and wireless providers	Yes
RF Field Engineering Services	Comprehensive coverage verification via field study	Yes
	RF exposure measurements	Yes
	Additional Field Engineering Service	No
	Number of Days	N/A
	Justification	N/A

**Outside
Professional
Services
Costs**

Other Professional Services Expenses Not Listed

Name	Description
Site Visits and Surveys	Site visits to establish what equipment is on premises, where new equipment will be located and do equipment inventory for both main and auxiliary sites.

Progress Reporting	Prepare and file 7 required progress reports on FCC Form 2100, Schedule 387 on a quarterly basis with the FCC.
Ch. 14 Field measurements	Measurements specifically related to channel 14 interference to Land Mobile facilities.

Other Expenses

Section	Question	Response
AM Pattern Disturbance	Is an Impact Study needed?	No
	Is Remediation needed?	No
Facility Expenses	Name	N/A
	Other Distributed Transmission System Expenses Not listed	N/A
	Name	N/A
	Is Notification of a Medical Facility required as a result of DTV broadcasting?	Yes
Permit and Filing Costs	Local Zoning	No
	Non-zoning permits	Yes
	BLM or NFS Coordination	No
	FCC Construction Permit Minor Change	No
	FCC License to Cover Application	No
	FCC Special Temporary Authority Application	Yes
Other Miscellaneous Expenses	Does this relocation require paying Disposal Costs (for equipment and other waste, net of any salvage value)?	Yes
	Does this relocation require Equipment Delivery or Handling Charges not otherwise included in individual item costs?	Yes
	Does this relocation require Equipment Storage?	Yes
	Does this relocation require the Development and Airing of an Announcement regarding an upcoming channel change?	Yes
	Does this relocation require MVPD Notification of a Channel Change?	Yes

**Other
Expenses**

Other Expenses Not Listed

Name	Description
Land Mobile Remediation 1	See Budget Justification: LAND MOBILE OPERATIONS
Land Mobile Remediation 2	See Budget Justification: LAND MOBILE
Land Mobile Remediation 3	See Budget Justification: LAND MOBILE
Land Mobile Remediation 4	See Budget Justification: LAND MOBILE
Land Mobile Remediation 5	See Budget Justification: LAND MOBILE
Additional Legal Expenses	Additional legal expenses for Public TV station with unable to construct problem, complex main and interim site and Land Mobile issues.

Cost Information

Transmitters

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Interim Transmitter ULXTE-8	\$339,000.00	\$339,000.00		\$0.00	
UHF - Liquid Cooled Solid State Transmitter 4.0 kW	<i>\$225,000.00</i>	\$225,000.00	See Budget Justification: AUXILIARY TRANSMITTER SITE.	N/A	N/A
Studio-Transmitter-Link	<i>\$100,000.00</i>	\$100,000.00	Microwave or fiber connectivity to get programming from the studio to the interim transmitter site.	N/A	N/A
Other Electrical Service: Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.	<i>\$14,000.00</i>	\$14,000.00	Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.	N/A	N/A
Interim Transmitter ULXTE-72	\$1,514,000.00	\$1,514,000.00		\$0.00	

UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	\$1,400,000.00	\$1,400,000.00	N/A	N/A	N/A
Other Electrical Service: Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.	<i>\$14,000.00</i>	\$14,000.00	Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.	N/A	N/A
Studio- Transmitter- Link	<i>\$100,000.00</i>	\$100,000.00	Microwave or fiber connectivity to get programming from the studio to the interim transmitter site.	N/A	N/A
Primary Transmitter ULXTE-6	\$2,242,895.00	\$2,241,988.00		\$0.00	
UHF - Liquid Cooled Solid State Transmitter 4.32 kW	<i>\$201,602.00</i>	\$201,602.00	N/A	N/A	N/A

Rent Increase	<i>\$805,293.00</i>	\$805,293.00	Estimated increase on top of current building lease due to having to expand the building to accommodate large channel 14 filtering.	N/A	N/A
RF Consulting Engineer	\$5,000.00	\$65,000.00	Additional services to design complex filtering for Land Mobile Protection. See attached justification.	N/A	N/A
Channel 14 Mask Filter	\$180,000.00	\$119,093.00	N/A	N/A	N/A
Filter Design	<i>\$5,000.00</i>	\$5,000.00	Anticipated expense in the design of Mask and notch filtering to reduce interference to into Land Mobile stations.	N/A	N/A
Other -- Building Addition Size: 2000.0	<i>\$1,027,000.00</i>	\$1,027,000.00	See attached Budget Justification: TRANSMITTER BUILDING	N/A	N/A

Other Electrical Service: Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.	<i>\$14,000.00</i>	\$14,000.00	Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.	N/A	N/A
Notch Filter Install	<i>\$5,000.00</i>	\$5,000.00	Installation of additional notch filtering to protect Land Mobile stations.	N/A	N/A
Auxiliary Transmitter ULXTE-20	\$1,065,000.00	\$971,775.00		\$0.00	
Channel 14 Mask Filter	\$180,000.00	\$119,093.00	N/A	N/A	N/A
Other Electrical Service: Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.	<i>\$14,000.00</i>	\$14,000.00	Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.	N/A	N/A

Other -- Building Addition Size: 900.0	<i>\$396,000.00</i>	\$396,000.00	See attached Budget Justification: AUXILIARY TRANSMITTER SITE	N/A	N/A
Notch Filter Install	<i>\$5,000.00</i>	\$5,000.00	Installation of Land Mobile notch filters.	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 8.2 - 13 kW	\$470,000.00	\$437,682.00	N/A	N/A	N/A
Auxiliary Transmitter ULXTE-6	\$405,602.00	\$344,695.00		\$0.00	
Notch Filter Install	<i>\$5,000.00</i>	\$5,000.00	Installation of additional notch filtering to protect Land Mobile stations.	N/A	N/A
Filter Design	<i>\$5,000.00</i>	\$5,000.00	Anticipated expense in the design of Mask and notch filtering to reduce interference to into Land Mobile stations.	N/A	N/A
Channel 14 Mask Filter	\$180,000.00	\$119,093.00	N/A	\$0.00	N/A

Other Electrical Service: Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.	<i>\$14,000.00</i>	\$14,000.00	Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 4.32 kW	<i>\$201,602.00</i>	\$201,602.00	N/A	N/A	N/A
Sub-total	\$5,566,497.00	\$5,411,458.00	N/A	\$0.00	N/A
Total for all systems	\$48,154,378.00	\$48,050,047.50	N/A	\$0.00	N/A

Components

Information not provided.

**Cost
Information**

Antennas

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Antenna TUP-04-12-2	\$586,400.00	\$630,000.00		\$0.00	
New combiner, cost per channel (without antenna)	\$80,000.00	\$125,000.00	WETA Share of a 3 channel combiner. See attached Budget Justification: COMBINER as to the overage from catalog cost per station.	N/A	N/A
UHF - High Power Top Mount Three Station broadband panel antenna horizontally polarized	<i>\$500,000.00</i>	\$500,000.00	See attached Budge Justification: ANTENNA. Antenna performance poor on channel 14. Replacement is anticipated.	N/A	N/A
Sweep test of existing antenna	\$6,400.00	\$5,000.00	N/A	N/A	N/A
Auxiliary Antenna TUA-O4-8 /32H-1-R SM	\$349,300.00	\$431,768.00		\$0.00	

Side mount brackets for high power antennas (if not included in antenna base cost)	\$22,000.00	\$21,750.00	N/A	N/A	N/A
Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	\$13,000.00	\$10,298.00	N/A	N/A	N/A
UHF – Broadband Panel, Side Mount Auxiliary /Interim, 30 horizontally polarized	<i>\$222,900.00</i>	\$222,900.00	See attached Budget Justification: AUXILIARY TRANSMITTER SITE	N/A	N/A
New combiner, cost per channel (without antenna)	\$80,000.00	\$165,420.00	WETA Share of a 3 channel combiner. See attached Budget Justification: AUXILIARY TRANSMITTER SITE as to the slight overage from catalog.	N/A	N/A
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	\$5,000.00	\$5,000.00	N/A	N/A	N/A

Sweep test of existing antenna	\$6,400.00	\$6,400.00	N/A	N/A	N/A
Sub-total	\$935,700.00	\$1,061,768.00	N/A	\$0.00	N/A
Total for all systems	\$48,154,378.00	\$48,050,047.50	N/A	\$0.00	N/A

Components

Information not provided.

Cost
Information

Transmission Line

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Auxiliary Transmission Line	\$115,141.00	\$99,991.50		\$0.00	
Rigid Transmission Line - copper, 6 1/8" broadband	\$115,141.00	\$99,991.50	N/A	N/A	N/A
Sub-total	\$115,141.00	\$99,991.50	N/A	\$0.00	N/A
Total for all systems	\$48,154,378.00	\$48,050,047.50	N/A	\$0.00	N/A

Components

Information not provided.

Cost Information

Tower Equipment and Rigging Costs

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Auxiliary Tower LTOWER	\$242,000.00	\$192,000.00		\$0.00	
Structural engineering tower load study for well documented tower	\$12,000.00	\$12,000.00	N/A	N/A	N/A
Minor tower reinforcement /modifications	\$150,000.00	\$100,000.00	N/A	N/A	N/A
Short Tower (less than 500')	\$80,000.00	\$80,000.00	N/A	N/A	N/A
Primary Tower TOWER	\$412,000.00	\$285,000.00		\$0.00	
Structural engineering tower load study for well documented tower	\$12,000.00	\$35,000.00	Replacement of top mounted antenna will be difficult to rig. Further detailed structural engineering analysis is anticipated to examine rigging details and temporary load capacity of the tower.	N/A	N/A

Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	\$400,000.00	\$250,000.00	Top consists of 3 stacked antennas.	N/A	N/A
Sub-total	\$654,000.00	\$477,000.00	N/A	\$0.00	N/A
Total for all systems	\$48,154,378.00	\$48,050,047.50	N/A	\$0.00	N/A

Components

Information not provided.

Cost Information

Outside Professional Services

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Outside Professional Services	\$598,250.00	\$718,850.00		\$0.00	
Prepare and or review reimbursement form	\$2,500.00	\$10,600.00	This is a complex project and requires careful attention to detail in assembling. Substantial time has been placed into the preparation of the form with supporting justification for both main and auxiliary sites.	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,000.00	\$3,000.00	N/A	N/A	N/A
Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	\$4,000.00	\$4,000.00	N/A	N/A	N/A

Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,250.00	\$2,250.00	N/A	N/A	N/A
Attorney Fees - Negotiation of lease and other matters for shared locations	\$4,000.00	\$75,000.00	Lease modifications negotiations for main antenna /combiner. Building permit applications and possible hearings. (50,000) For the auxiliary site applications and hearings for building expansion (25,000).	N/A	N/A
Attorney Fees - Prepare and File request for Special Temporary Authorization	\$3,500.00	\$7,000.00	The need for filing two STA's in a project of this magnitude is anticipated.	N/A	N/A
Site Visits and Surveys	<i>\$9,000.00</i>	\$9,000.00	Site visits to establish what equipment is on premises, where new equipment will be located and do equipment inventory for both main and auxiliary sites.	N/A	N/A
Project management of the transition	\$315,000.00	\$315,000.00	N/A	N/A	N/A

Address transition timing and coordination issues w/ other stations and wireless	\$2,500.00	\$11,000.00	Coordination with 4 TV stations and 3 FM stations. Cut over must be carefully planned with other two stations. Contacting Land Mobile operators on cutover to ensure no interference by WETA	N/A	N/A
Prepare request for Special Temporary Authorization	\$1,500.00	\$3,000.00	Two STA's are anticipated, one for the main site and the other for the auxiliary.	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,000.00	\$5,000.00	N/A	N/A	N/A
Comprehensive coverage verification via field study, if needed	\$80,000.00	\$100,000.00	\$80,000 for Main transmitter site and \$20,000 for auxiliary site.	N/A	N/A
Perform engineering study for new channel assignment and antenna development	\$7,000.00	\$14,000.00	Extensive study has already been given to searching for a new channel and Land Mobile interference and remediation.	N/A	N/A

RF Consulting Engineer Fees-Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	\$2,000.00	\$3,000.00	Time required will be similar to that required of the main site to prepare this application.	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	\$1,500.00	\$1,500.00	N/A	N/A	N/A
RF Consulting Engineer Fees-Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	\$1,500.00	\$1,500.00	N/A	N/A	N/A
RF Exposure Measurements	\$20,000.00	\$20,000.00	N/A	N/A	N/A
Progress Reporting	<i>\$14,000.00</i>	\$14,000.00	Prepare and file 7 required progress reports on FCC Form 2100, Schedule 387 on a quarterly basis with the FCC.	N/A	N/A

Ch. 14 Field measurments	<i>\$120,000.00</i>	\$120,000.00	Measurements specifically related to channel 14 interference to Land Mobile facilities from both main and auxiliary sites.	N/A	N/A
Sub-total	\$598,250.00	\$718,850.00	N/A	\$0.00	N/A
Total for all systems	\$48,154,378.00	\$48,050,047.50	N/A	\$0.00	N/A

Components

Information not provided.

Cost Information

Other Expenses

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Other Expenses	\$40,284,790.00	\$40,280,980.00		\$0.00	
Develop and air announcement of upcoming channel change	<i>\$7,500.00</i>	\$7,500.00	Costs for production and airtime of channel change announcements.	N/A	N/A
DTV Medical Facility Notification	\$11,000.00	\$7,000.00	N/A	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	<i>\$1,000.00</i>	\$1,000.00	Some disposal costs are anticipated for old equipment removed from service. This modest amount is proposed for such disposal.	N/A	N/A
Equipment Delivery and Handling Charges	<i>\$23,100.00</i>	\$23,100.00	Estimated freight charges for multiple transmitters and auxiliary antenna not included in quotations for equipment from vendors.	N/A	N/A
Equipment Storage	<i>\$10,000.00</i>	\$10,000.00	See attached Budget Justification: FEES AND MISCELLANEOUS EXPENSES	N/A	N/A

MVPD Notification of Channel Change	<i>\$7,000.00</i>	\$7,000.00	Estimated cost of using outside firm to contact MVPD's regarding channel change to repack channel.	N/A	N/A
Land Mobile Remediation 1	<i>\$8,000,000.00</i>	\$8,000,000.00	See Budget Justification: LAND MOBILE	N/A	N/A
Land Mobile Remediation 2	<i>\$8,000,000.00</i>	\$8,000,000.00	See Budget Justification: LAND MOBILE	N/A	N/A
Land Mobile Remediation 3	<i>\$8,000,000.00</i>	\$8,000,000.00	See Budget Justification: LAND MOBILE	N/A	N/A
Land Mobile Remediation 4	<i>\$8,000,000.00</i>	\$8,000,000.00	See Budget Justification: LAND MOBILE	N/A	N/A
Land Mobile Remediation 5	<i>\$8,000,000.00</i>	\$8,000,000.00	See Budget Justification: LAND MOBILE	N/A	N/A
Additional Legal Expenses	<i>\$200,000.00</i>	\$200,000.00	Additional legal expenses for public TV station with complex main and interim tower site, unable to construct issues and land mobile remediation issues.	N/A	N/A
Non-zoning permits	<i>\$25,000.00</i>	\$25,000.00	Estimate of building permit costs to modify building of main and auxiliary transmitter sites.	N/A	N/A
FCC Filing Fees - Special Temporary Authorization request	\$190.00	\$380.00	Anticipate needing to file two STA's in a project this complex.	N/A	N/A
Sub-total	\$40,284,790.00	\$40,280,980.00	N/A	\$0.00	N/A

Total for all systems	\$48,154,378.00	\$48,050,047.50	N/A	\$0.00	N/A
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Components

Information not provided.

Cost Information	Grand Total			
		Predetermined Cost Estimate	Estimated Cost	Actual Cost
	Total for all systems	\$48,154,378.00	\$48,050,047.50	\$0.00

Construction Status	Question	Response
	Is construction complete?	No

Certification	Section	Question	Response
	Submission of Estimated Expenses Statements	<p>WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT.</p>	
		<ol style="list-style-type: none"> 1. The Authorized Person signing below certifies that he /she is authorized to submit this TV Broadcaster Relocation Fund Reimbursement Form on behalf of the above-named entity. 2. The above-named entity acknowledges that all certifications and attached documentation are considered material representations. 3. The above-named entity acknowledges the submission of the information herein creates no obligation on the part of the government to pay any amount. 	

4. The above-named entity certifies that the equipment and services paid for with money from the TV Broadcaster Relocation Fund are necessary to change channels (broadcasters) or to continue to carry the signal of a broadcaster that changes channels (MVPD).
5. The above-named entity certifies that all payments from the TV Broadcaster Relocation Fund (Fund) received by the entity listed on this form will be used only for expenses that are eligible for reimbursement from the Fund.
6. The above-named entity certifies that it will maintain and provide to the Commission detailed records, including receipts, of all costs eligible for reimbursement actually incurred.
7. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.

<p>8. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a pre-requisite for obtaining the payments herein requested.</p>	
<p>I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.</p>	<p>Lisa Lindstrom Delaney <i>Senior Vice President and General Counsel</i></p> <p>07/13/2017</p>

Certification	Section	Question	Response
	Submission of Actual Cost Documentation Statements	<p>WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT.</p>	
		<ol style="list-style-type: none"> 1. The Authorized Person signing below certifies and represents that he /she is authorized to submit this TV Broadcaster Relocation Fund Reimbursement Form on behalf of the above-named entity. The above-named entity acknowledges that all certifications and attached documentation are considered material. 2. The above-named entity acknowledges the submission of the information herein creates no obligation on the part of the government to pay any amount. 	

3. The above-named entity certifies that the equipment and services paid for with money from the TV Broadcaster Relocation Fund are necessary to change channels (broadcasters) or to continue to carry the signal of a broadcaster that changes channels (MVPD).
4. The above-named entity certifies that all payments from the TV Broadcaster Relocation Fund (Fund) received by the entity listed on this form will be used only for expenses that are eligible for reimbursement from the Fund.
5. The above-named entity certifies that the cost information /documents submitted reflect costs actually incurred.
6. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.
7. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a pre-requisite for obtaining the payments herein requested.

<p>I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.</p>	<p>na (Estimated cost filing only) na (Estimated cost filing only) <i>na</i> <i>(Estimated cost filing only)</i></p> <p>07/12/2017</p>
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Attachments